

CLAIMS

1. A radio communication system having a communication channel
5 between a primary station and a secondary station, the primary and secondary
stations having means for communicating according to first and second two-
way communication modes, wherein the communication channel comprises at
least one of an uplink and a downlink channel for the first mode and one of an
uplink and a downlink channel for the second mode, the other channel for the
10 second mode being absent, and means are provided for transmitting and
receiving data normally routed via an absent channel of one mode via a
respective channel of the other mode.

2. A system as claimed in claim 1, characterised in that the first
15 mode is one of UMTS TDD, DECT or Bluetooth.

3. A system as claimed in claim 1, characterised in that the second
mode is HIPERLAN/2 or UMTS FDD.

4. A system as claimed in claim 1, characterised in that the
20 communication channel for the first mode is only operable in both of an uplink
and a downlink direction.

5. A system as claimed in claim 1, characterised in that the
25 communication channel for the first mode is only operable in the one of an
uplink and a downlink direction not provided for the second mode, and means
are provided for transmitting and receiving data normally routed via the absent
channel of the first mode via the present channel for the second mode.

6. A primary station for use in a radio communication system having
30 a communication channel between the primary station and a secondary
station, wherein means are provided for communicating according to first and

second two-way communication modes, the communication channel comprises at least one of an uplink and a downlink channel for the first mode and one of an uplink and a downlink channel for the second mode, the other channel for the second mode being absent, and means are provided for
5 transmitting or receiving data normally routed via an absent channel of one mode via a respective channel of the other mode.

7. A primary station as claimed in claim 6, characterised in that the means for communicating according to a first communication mode and the
10 means for communicating according to a second communication mode are located in separate stations and in that a communication link is provided between the stations.

8. A primary station as claimed in claim 6, characterised in that
15 means are provided for transmitting information about a radio interface specification defining the second mode to the secondary station via the downlink communication channel of the first mode.

9. A primary station as claimed in claim 8, characterised in that the
20 information comprises the specification itself.

10. A primary station as claimed in claim 8, characterised in that the information comprises a software module for implementing the specification.

25 11. A primary station as claimed in claim 8, characterised in that the information comprises the location of a source from which the secondary station can obtain the specification.

12. A secondary station for use in a radio communication system
30 having a communication channel between a primary station and the secondary station, wherein means are provided for communicating according to first and second two-way communication modes, the communication channel

comprises at least one of an uplink and a downlink channel for the first mode and one of an uplink and a downlink channel for the second mode, the other channel for the second mode being absent, and means are provided for transmitting or receiving data normally routed via an absent channel of one mode via a respective channel of the other mode.

13. A secondary station as claimed in claim 12, characterised in that means are provided for receiving information about a radio interface specification defining the second mode transmitted by the primary station via the downlink communication channel of the first mode and for implementing the second mode in response to the received information.

14. A secondary station as claimed in claim 13, characterised in that the means for implementing the second mode comprise means for obtaining a specification for the second mode from a source specified by the primary station.

15. A method of operating a radio communication system having a communication channel between a primary station and a secondary station, wherein the system supports communications according to first and second two-way communication modes, the communication channel comprises at least one of an uplink and a downlink channel for the first mode and one of an uplink and a downlink channel for the second mode, the other channel for the second mode being absent, and the method comprises transmitting and receiving data normally routed via an absent channel of one mode via a respective channel of the other mode.

16. A method as claimed in claim 15, characterised by the primary station transmitting information about a radio interface specification defining the second mode to the secondary station via the downlink communication channel of the first mode and by the secondary station implementing the second mode in response to the received information.

17. A method as claimed in claim 15, characterised by the second mode being activated and deactivated as required while the first mode remains active.

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